

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
18 March 2004 (18.03.2004)

PCT

(10) International Publication Number
WO 2004/022764 A3

(51) International Patent Classification⁷: C12P 13/04,
7/04, 41/00, 12/22, 13/06, C12N 15/53, 9/04

(21) International Application Number:
PCT/EP2003/008631

(22) International Filing Date: 5 August 2003 (05.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
102 40 603.0 3 September 2002 (03.09.2002) DE

(71) Applicant (for all designated States except US): DE-
GUSSA AG [DE/DE]; Bennigsenplatz 1, 40474 Düssel-
dorf (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): NÁAMNIEH,
Shukrallah [IL/DE]; Stippelburggasse 20, 40221 Düssel-
dorf (DE). HUMMEL, Werner [DE/DE]; Claudiusstrasse
11, 52445 Titz (DE). GRÖGER, Harald [DE/DE];
Akademiestrasse 31, 63450 Hanau (DE).

(74) Common Representative: DEGUSSA AG; Intellectual
Property Management, PATENTE und MARKEN, Stan-
dort Hanau, Postfach 13 45, 63403 Hanau (DE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
21 October 2004

(48) Date of publication of this corrected version:
14 April 2005

(15) Information about Correction:
see PCT Gazette No. 15/2005 of 14 April 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: USE OF MALATE DEHYDROGENASE FOR NADH REGENERATION

(57) Abstract: The present invention relates to a process for the preparation of enantiomerically enriched organic compounds. In particular, the present invention relates to an enzymatically operating process, in which, in a coupled enzymatic reaction system, NAD(P)H is consumed by one enzyme for the preparation of the organic compound and the NAD(P)H is simultaneously regenerated by a second enzyme system. A reaction system which operates according to the invention in this manner and an advantageous whole cell catalyst are also proposed.

WO 2004/022764 A3